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09/723,480	11/28/2000	Dave McDysan	RIC00044	7587
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VERIZON PATENT MANAGEMENT GROUP 1320 North Court House Road 9th Floor ARLINGTON, VA 22201-2909			EXAMINER BATES, KEVIN T	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 09/723,480	Applicant(s) MCDYSAN ET AL.	
	Examiner KEVIN BATES	Art Unit 2456	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 22 September 2010.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-43 is/are pending in the application.

 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-43 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Response to Amendment

This Office Action is in response to a communication made on September 22, 2010.

Claims 41-43 are newly added.

Claims 1-43 are pending in this application.

Claim Rejections - 35 USC § 112

The rejection of claims 21-39 under 35 USC §112, second paragraph is withdrawn due to the applicant's formatting change of changing of comma into a semi-colon which clarifies the scope of the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 7-9, 12-13, 17, 20-24, 27-28, 31-32, 36, and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert (6606316) in view of Gai (6167445).

Regarding claims 1 and 21, Albert teaches a method of communication in, a network access system including an external processor and a programmable access

device (Figure 2A, where the PAD is the forwarding agent and the external processor is the service manager), said method comprising:

receiving a control message from the external processor to the programmable access device to establish a configuration of the programmable access device (Column 6, lines 40 – 46);

receiving, by the programmable access device, messages from a first network external to the network access system via a first network interface (Column 6, lines 24 – 27);

processing, by the programmable access device, the messages from the first network to distinguish between various message types and to establish a first subset of the received messages and a second subset of the received messages. (Column 6, lines 46 – 50; Column 9, lines 14 – 20);

communicating a first subset of the received messages from the programmable access device to the external processor for service processing in accordance with the configuration (Column 6, lines 46 – 50; Column 9, lines 14 – 20); and

routing a second subset of the received messages not communicated to the external processor from the network access system via a second network interface different from the first network interface to a second network external to the first network access system, wherein the second network is different from the first network (Column 6, lines 44 – 48).

Albert teaches that the programmable access device and external process are providing network service between a network and physical services (Col. 2, lines 20 – 37). Albert does not explicitly indicate that the second subset of packets are transmitted from the programmable access device through another access router to the second external network.

Gai '445 teaches a system with intermediate device for maintaining network services, packet classification, packet filtering, and other policy implementation like the forwarding agents in Albert (Col. 12, lines 19 - 67) where those devices forward subsets of packets into other access routers in the internal network. See Fig 3, where the intermediate device 318, accepts traffic from an external network 304 and forwards packets onto other access routers such as 312.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to expand Albert's system instead of just operating as a forwarding agent for host servers it can operate to provide services and forwarding functions for an entire network including other routers to allow a more diverse implementation of the system.

Regarding claim 40, Albert teaches a distributed router comprising:

a first network interface through which packets are communicated with a first network (Figure 2B, element 260);

a second network interface different from the first network interface through which packets are communicated with a second network different from the first network (Figure 2B element 258);

a programmable access device configured to input messages from the first network via the first network interface (Column 6, lines 24 – 27); and

an external processor configured to receive, from the programmable access device, a first portion of the input messages and to transmit a control message to the programmable access device specifying a configuration to control the selection of the first subset (Column 6, lines 46 – 50; Column 9, lines 14 – 20),

wherein the programmable access device forwards a second portion of the input messages not received by the external processor for routing via the second network interface to the second network (Column 6, lines 44 – 48).

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Gai '445 teaches a system with intermediate device for maintaining network services, packet classification, packet filtering, and other policy implementation like the forwarding agents in Albert (Col. 12, lines 19 - 67) where those devices forward subsets of packets into other access routers in the internal network. See Fig 3, where the intermediate device 318, accepts traffic from an external network 304 and forwards packets onto other access routers such as 312.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to expand Albert's system instead of just operating as a forwarding

agent for host servers it can operate to provide services and forwarding functions for an entire network including other routers to allow a more diverse implementation of the system.

Regarding claim 2 and 22, Albert teaches that transmitting a control message comprises transmitting a filter control message to establish a configuration of a packet header filter in the programmable access device (Column 8, lines 62 – 65); and communicating messages comprises communicating network messages filtered from a packet flow by the packet header filter of the programmable access device (Column 12, lines 48 – 62).

Regarding claim 3 and 23, Albert discloses limiting communication of network messages from the programmable access device to the external processor by sending the programmable access device a message setting message interface flags in the programmable access device (Figure 12A and 12B).

Regarding claims 4 and 24, Albert teaches transmitting a control message comprises transmitting a monitor control message to establish a configuration of a monitor in the programmable access device; and communicating messages comprises communicating reporting messages from the programmable access device to the external processor in response to the configuration of the monitor (Column 6, lines 40 – 53).

Regarding claim 7 and 27, Albert teaches transmitting a control message comprises transmitting a policer control message to establish a configuration of a policer in the programmable access device (Column 6, lines 40 – 53).

Regarding claims 8 and 28, Albert teaches transmitting a control message comprises transmitting a forwarding table control message to establish a configuration of a forwarding table in the programmable access device (Column 12, lines 48 – 62).

Regarding claim 9, Albert teaches establishing a configuration of a forwarding table comprises establishing a new forwarding table in the programmable access device (Column 8, lines 62 – 65).

Regarding claim 12 and 31, Albert teaches teaches transmitting a control message from the external processor to the programmable access device to establish a configuration of the programmable access device comprises transmitting a control message specifying a source from which packets are not to be accepted; and the method further comprises dropping packets from the specified source by the programmable access device (Column 9, lines 14 – 16).

Regarding claim 13 and 32, Albert teaches indicate that in response to service processing by the external processor, injecting a packet from the external processor into packet flow through the programmable access device (Column 9, lines 21 – 28).

Regarding claim 17 and 36, Albert teaches the method of claims 1 and 21, wherein receiving a control message comprises accessing a control processor on the external processor via an application programming interface (Column 10, lines 1 – 4).

Regarding claims 20 and 39, Albert teaches transmitting a control message comprises transmitting a control message via an intermediate communication network (Column 9, lines 36 – 47).

Claims 5 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Gai '455, and in further view of Haas (5115432).

Regarding claim 5 and 25, Albert teaches the method of claims 1 and 21.

Albert does not explicitly indicate transmitting a monitor control message comprises transmitting a control message to establish a threshold number of allowed retransmissions.

Haas teaches that an access device's configured policy should include a retransmissions policy (Column 7, lines 45 – Column 8, line 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Haas' teachings of a retransmission policy on Albert's network node reconfiguration system in order to give the network management a tool to help reduce congestion in the system and obtain optimal performance (Column 7, lines 58 – 61).

Claims 16, 18, 35, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Gai '455, and in further view of Feldman (6055561).

Regarding claims 16, 18, 35, and 37, Albert teaches the method of claims 1 and 21.

Albert does not explicitly indicate exchanging keepalive and acknowledgment messages between the external processor and the programmable access device.

Feldman discloses a network system with network nodes and teaches acknowledgement and keepalive messages are communicated between the nodes (Figure 5; Column 9, line 65 – Column 10, line 11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Feldman's teaching of keepalive messages and acknowledgements in Albert's system in order to know that the communication paths are still open and the communications are being received (Column 9, line 65 – Column 10, line 11).

Claims 19 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Gai '455, and in further view of Grant (5027269).

Regarding claims 19 and 38, Albert teaches the method of claims 1 and 21.

Albert does not explicitly indicate that in response to failure of a service controller servicing the session in the external processor.

Grant discloses a system for failure recovery where in the detection of failure in a system where data is lost (Column 4, lines 42 – 51) sending a request for state of a session information (Column 4, line 67 – Column 5, line 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Grant's teaching in Albert in order to allow the external processor to recover the data that was lost as result of a fault (Column 2, lines 46 – 65).

Claims 10-11 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Gai '455, and in further view of Gai (6651096).

Regarding claim 10 and 29, Cohen teaches the method of claims 1 and 21.

Albert does not explicitly indicate transmitting a control message comprises transmitting a control message to establish a configuration of a scheduler and one or more associated output buffers in the programmable access device.

Gai '096 discloses a system for controlling the configuration of an access device that includes making configuration changes to a scheduler and has one or more output queues (Column 6, lines 19 – 28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching of configuration a scheduler on an access device in Albert's system in order to ensure QoS treatments for data flows (Column 6, lines 18 – 21).

Regarding claim 11 and 30, Albert teaches the method of claims 1 and 21.

Albert does not explicitly indicate transmitting a control message comprises transmitting a shaper control message to establish a configuration of a shaper in the programmable access device.

Gai '096 discloses transmitting a control message comprises transmitting a shaper control message to establish a configuration of a shaper in the programmable access device (Gai, Column 6, lines 19 – 30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching of configuration a scheduler on an access device in Albert's system in order to ensure QoS treatments for data flows (Column 6, lines 18 – 21).

Claims 6, 14-15, 26, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Gai '455, and in further view of Gibson (6680943).

Regarding claim 6 and 26, Albert teaches the method of claims 4 and 24.

Albert does not explicitly indicate transmitting a monitor control message comprises transmitting a threshold activity level.

Gibson teaches a network node remotely configured that includes configuring a session to have a guaranteed quality of service, which gives a minimum threshold of activity to a connection session (Column 9, lines 32 – 37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gibson's teachings on Albert's system in order provide users with guaranteed service, especially for applications such as video and voice.

Regarding claim 14 and 33, Albert teaches the method of claims 1 and 21.

Albert does not explicitly indicate transmitting a control message from the external processor to the programmable access device to establish a configuration of the programmable access device comprises transmitting a session deletion control message; and the method further comprises the programmable access device deleting a session specified by the session deletion control message

Gibson discloses transmitting a control message from the external processor to the programmable access device to establish a configuration of the programmable access device comprises transmitting a session deletion control message; and the method further comprises the programmable access device deleting a session specified

by the session deletion control message because it discloses starting a session (INVITE) and deleting (tearing down or cancelling) a session (BYE and CANCEL) where these messages go from the control node to the access device (Gibson, Figure 3, Column 12, lines 7 – 14; Column 12, line 65 – Column 13, line 17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gibson's teachings on Albert's system in order provide users with guaranteed service, especially for applications such as video and voice.

Regarding claim 15 and 34, Albert teaches the method of claims 1 and 21.

Albert does not explicitly indicate that the external processor signals network hardware to establish a network connection in response to receipt of a message from the programmable access device

Gibson discloses the external processor signaling network hardware to establish a network connection in response to receipt of a message from the programmable access device (Gibson, Column 9, lines 32 – 40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gibson's teachings on Albert's system in order provide users with guaranteed service, especially for applications such as video and voice.

Regarding claim 42, Albert in combination with Gai teaches the network access system of Claim 21, further comprising: a third network coupling the programmable access device to the access router (Col. 8, lines 17-25; where there can be switches and servers between edge routers and other routers).

Regarding claim 43, Albert in combination with Gai teaches the network access system of Claim 42, wherein the coupling is made via one of an Asynchronous Transfer Mode (ATM) switch and a Multi-Protocol Label Switching (MPLS) switch (Gai, Col. 5, lines 10 – 15).

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Gai, and in further view of Mo (7133403).

Regarding claim 41, Albert in view of Gai teaches the network access system of Claim 21.

The combination does not explicitly indicate wherein the access router comprises a forwarding table, and Exterior Gateway Protocol (EGP) and Interior Gateway Protocol (IGP) routing tables.

Mo teaches a network access system with edge routers and internal routers (Col. 6, lines 36 - 43) with includes access router comprises a forwarding table, and Exterior Gateway Protocol (EGP) and Interior Gateway Protocol (IGP) routing tables (Col. 6, lines 57 – 64; Col. 2, lines 10 – 17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Mo's teaching of IGP and EGP protocols to generate the forwarding tables in routers that enact edge routers and internal routers.

Response to Arguments

Applicant's arguments filed September 22, 2010 have been fully considered but they are not persuasive.

The applicant argues that Albert in combination with Gai would not teach the second subset of packets being transferred to a second network via an access router. The examiner disagrees. Albert teaches In figure 2A that the second subset of packets not transferred to the service manager, travel straight to element 220, which is one or more servers. As result, Albert teaches network 210, but no network with individual routers between forwarding agent 1, and the plurality of services. See Col., lines 44 – 48. Gai suggests a more robust network (See Fig 3), including an external policy server and edge routers with apply policy information. See Col. 7, line 55 – Col. 8, line 25. As part of Gai's teaching, the edge router applies policy rules to the packets and forwards the packets coming into the network from the edge router to an internal router as part of a path to a second network. See Fig. 3, element 316 for example. One of ordinary skill, could use the suggestion of Gai of having an edge router using policy system, much like the forwarding agent in Albert, for control of the flow of data into an internal network, as shown in Figure 3 of Gai, rather than just forwarding messages to one or more servers. As result, using Gai's suggestion to improve Albert, Albert's forwarding agent can forward the taught subset of packets not forwarded to the service managers directing to a internal network instead of just one or more servers.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN BATES whose telephone number is (571)272-3980. The examiner can normally be reached on M-F 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharra can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KEVIN BATES/
Primary Examiner, Art Unit 2456